

## Claims:

1. A vaccine comprising a recombinant fusion protein capable of eliciting immunity against Schistosoma parasites, comprising an amino acid sequence selected from the 27/28 kDa cercarial elastase sequence of S. mansoni and active fragments, homologues and variants thereof, fused to a protein selected from suitable bacterial, phage and viral proteins, together with a pharmaceutically acceptable carrier.

2. A vaccine as claimed in claim 1 wherein the fusion protein comprises an amino acid sequence coding for the nucleotide of the cercarial elastase gene of S. mansoni (Seq. I.D. 1) or a homologue or variant thereof.

3. A vaccine as claimed in claim 1 wherein the fusion protein comprises at least the amino acid sequence coding for exon 2 of the S. mansoni cercarial elastase gene as herein defined (Seq. I.D. 2).

4. A vaccine as claimed in claim 3 wherein the fusion protein comprises at least amino acid residues 136 to 151 of the S. mansoni cercarial elastase molecule.

5. A vaccine as claimed in claim 1 wherein the fusion protein comprises a sequence of at least 16 amino acids including the sequence:

V G Y G R D D N D R D P S R K N (Seq. I.D. 3)

fused to a suitable bacterial, phage or viral protein.

6. A vaccine as claimed in claim 1 wherein the fused protein is a glutathione-S-transferase.

7. A vaccine as claimed in claim 6 wherein the fused protein is the 28 kDa glutathione-S-transferase of S. japonicum.

8. A vaccine as claimed in claim 1 adapted for oral administration

10

9. A vaccine as claimed in claim 1 adapted for administration by injection.

10. A vaccine as claimed in claim 1 capable of eliciting immunity in a human inoculated with the vaccine.

15

11. A vaccine as claimed in claim 10 capable of eliciting immunity against organisms selected from S. mansoni and S. haematobium.

20

12. A method of treating a mammal to elicit immunity against Schistosoma parasites which comprises administering to a mammal in need of treatment an amount of a vaccine which fails to cause disease resulting from Schistosoma parasites but which elicits immunity in the mammal and provides protection against subsequent challenge, said vaccine comprising a recombinant fusion protein capable of eliciting immunity against Schistosoma parasites, said protein comprising an amino acid sequence selected from the 27/28 kDa cercarial elastase sequence of S. mansoni and active fragments, homologues and variants thereof, fused to a protein selected from suitable

25

30

13. A method as claimed in claim 12 wherein the fusion  
5 protein comprises a sequence of at least 16 amino acids  
including the sequence:

10 fused to a suitable bacterial, phage or viral protein.

15 15. A method as claimed in claim 14 wherein the vaccine is administered orally.

20

17. A method as claimed in claim 12 wherein the vaccine is used to elicit immunity against organisms selected from S. mansoni and S. haematobium.

25